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Strategic questions of a horizontal policy nature:

Environment, climate change and transport –

Mitigation of environmentally harmful effects of inland transport

For Future Inland Transport Systems Project (ForFITS) – Gaining momentum and future directions

Note by the secretariat

Summary

This document provides information on the “For Future Inland Transport Systems (ForFITS) global project and its follow-up activities. The project, funded by the United Nations Development Account (UNDA), was the development of a tool for assessing transport CO₂ emissions and evaluating policy measures intended to mitigate them.

The ForFITS model was completed in early 2014 and applied in seven pilot countries (Chile, Ethiopia, France, Hungary, Montenegro, Thailand, Tunisia) to estimate future transport activity, energy use and CO₂ emissions under different scenarios and policy interventions. The countries chosen cover all the United Nations regional commissions. The model and results were presented at several awareness-raising events and capacity-building workshops.

The next phase of the ForFITS tool focuses on its implementation and maintenance. Several follow-up activities are underway, or beginning, to investigate expansion of the scope of the ForFITS tool in order to further increase its relevance and ensure its sustainability.

In light of the timeliness and relevance of the tool for sustainable development and the scope and utility of proposed enhancements to the tool, the Committee may wish to consider how it wishes to benefit from and contribute to the use and development of the ForFITS tool.

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I. Background

1. First conceived in 2008, ForFITS was a three-year project initiated in 2011 with the goal of enhancing international cooperation and planning towards sustainable transport policies. A particular aim was facilitating climate change mitigation. The project was funded by the UNDA and involved all United Nations Regional Commissions.
2. In order to achieve its goal, the project included:
 - the development and implementation of a tool to monitor and assess CO₂ emissions from inland transport activities. The model would include a transport policy converter;
 - the preparation and implementation of awareness-raising events for stakeholders involved in activities of transport, energy and CO₂ emissions; and
 - the organization and roll-out of training activities/capacity-building workshops for policymakers and technical experts.
3. The United Nations Economic Commission for Europe (UNECE) developed the model. A global review of existing statistical data, policy measures and assessment tools for CO₂ emissions in transport, and discussions on a draft methodology were held in April 2012 at an International Expert Meeting. A first prototype was presented in late 2012. Significant improvements were implemented in 2013. The UNDA project had foreseen the development of both a global status report at the start and a follow-up based on ForFITS results at the end of the project. The initial global status report was developed beyond its original scope, but due to time constraints, the more ambitious follow-up was limited to the report on the pilot projects.
4. The model and the user manual are now available free-of-charge from the UNECE website (www.unece.org/trans/theme_forfits.html). The manual provides details on the methodology behind the modelling approach; the model structure, giving information on each calculation step; the input data required, including explanations on how to use the input file; and instructions on how to perform model runs, including visualization and extraction of the results from the software application.
5. Today, the ForFITS modelling tool is capable of assisting users to make informed decisions on measures available for the reduction of CO₂ emissions in the transport sector. Users can compare a baseline scenario and a projected scenario where proposed transport policies are implemented. ForFITS estimates the level of emissions that can be "saved" by various policy scenarios. The results of these analyses may support the implementation of future transport policies that can be effective in reducing CO₂ emissions.
6. The tool focuses primarily on CO₂ emissions from inland transport, including road, rail and inland waterways, and predicts future emissions based on current patterns. CO₂ emissions from aviation and maritime transport are also covered by ForFITS, but in a simplified manner.

II. Activities in 2014

7. UNECE-led activities in the first quarter of 2014 completed the UNDA funded phase: completing the final ForFITS report and assisting with the evaluation report by an independent consultant. The outcome of the evaluation report was generally positive and is available on the UNECE website (www.unece.org/trans/theme_forfits.html).

8. Following training and analysis in the seven pilot studies in 2013, 2014 saw ForFITS used for the first time as an instrument for the assessment, monitoring and planning of sustainable transport policies in several regions. Demonstrating the appeal and benefits of ForFITS for international researchers and policymakers, users were in contact with the UNECE for clarification of technical issues while using the tool to assess CO₂ emissions in each of Lyon (France), São Paulo (Brazil), Egypt, and Lebanon using ForFITS. UNECE took a more direct role in using the model and analysing the results in for the city of Kaunas (Lithuania) and for the country of Georgia. The tool was used in the framework of the Transport, Health and Environment Pan-European Programme (THE PEP) in preparation for the annual urban transport workshop in Kaunas. A major policy review exercise was carried out both for Kaunas and for Lithuania, relying on the analysis and results of several scenarios generated by ForFITS. The review of transport generated CO₂ emissions in Georgia was carried out as part of the 3rd Environmental Performance Review of Georgia that was led by the UNECE Environment Division. In both cases, analyses were done by the UNECE Transport Division with the support of local consultants.

9. In addition to the direct implementation of ForFITS in various countries and regions, UNECE initiated a number of activities in 2014 intended to expand, maintain, and demonstrate the utility of the ForFITS tool.

10. Two specific activities on expanding the scope of ForFITS began in 2014. The first aimed at filling a gap in the coverage of the tool identified in training sessions. It had been noted that emissions from agricultural tractors and mobile construction machinery were not within the scope of the model. At the request of and on funds from Environment Canada, a study will be conducted by UNECE to investigate the feasibility of adding a module to ForFITS to account for non-road mobile machinery (NRMM). In addition to the main purpose of the project, these results could serve as a reference for countries with large numbers of these types of vehicles.

11. The second activity of expansion concerns road safety. Some of the variables driving CO₂ emission levels are relevant to road safety (namely ‘vehicle activity’ and ‘modal choice’) and an additional module to assess road safety policies could be a useful to the ForFITS package. The International Road Transport Union (IRU) has supported this activity and provided funds to develop a road safety module – to be abbreviated *SafeFITS* – to build road safety scenarios either in conjunction with or independently of ForFITS, but using the available and relevant data.

12. Early on in the development of ForFITS, maintenance activities were identified as essential to ensuring the viability of the tool in future years. UNECE has encouraged the independent use of ForFITS in its training sessions, and with the tool's free availability on the UNECE website, a first step towards maintaining the model was to provide assistance to the users of ForFITS. UNECE responded to numerous requests for technical assistance from users of ForFITS from around the world. In addition to resolving user issues, such communications occasionally highlighted minor technical/computer issues in ForFITS.

13. The final activity undertaken by UNECE in 2014 was demonstrating the utility of ForFITS. In an effort to quantify potential emissions “savings” from the transport sector at an international level, UNECE began collecting ForFITS input data from UNECE member States. ForFITS will subsequently, project CO₂ emissions from inland transport for these member States on a bilateral basis. A regional aggregate report would be ideal, subject to the availability of basic data. The report would aim at identifying opportunities for the reduction of emissions at different regional levels.

III. Future Activities

14. The UNECE Transport Division also held internal meetings to discuss future activities and identified new actions for the coming years that would continue to demonstrate the utility of, maintain and expand the ForFITS tool. Future activities under consideration are as follows:

- **Future value of the model is in its use** – It is important that the available ForFITS tool is used as widely as possible. This most feasible method would seem to be through the Environmental Performance Reviews (EPRs) and THE PEP.
- **Training of future users** – It is imperative that government officials, consultants, university professors, as well as representatives of non-governmental organizations and other international organisations are trained to use the ForFITS tool. Refresher courses for those who have already been trained and/or have used the tool, and new training courses for a broader audience would be necessary at least once a year. However, at this stage more courses would accelerate the deployment of ForFITS. In addition to these directly targeted trainings, “train the trainers” courses are also necessary. Donor funding is necessary.
- **ForFITS maintenance** – It is vital that the tool is updated regularly so that it remains relevant for users.
- **ForFITS enhancements** – Enhancing ForFITS is an important but time-consuming task which will be subject to time constraints and funding. The user interface of ForFITS could be improved in the long term to ease use. Continuing research on potential enhancements to some projection methods could also be part of future ForFITS efforts.
- **New modules** – Additional modules to project local pollutants and take into account transport infrastructure would broaden the scope of the tool. A module for local pollutants would be particularly useful to link results from ForFITS to Nationally Appropriate Mitigation Actions and provide quantified assessments of actions in support of country strategies. Development would also be subject to funding.

IV. Conclusion

15. The Committee is requested to consider the benefits from and the contributions to the use and development of the ForFITS tool in light of its timeliness and relevance to sustainable development, its scope and utility.
